

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended): A three mirror off-axis anastigmatic optic comprising:
  - a primary mirror;
  - a secondary mirror;
  - a tertiary mirror having a focal point which is off the optical axis; and
  - a vertex common to said primary and tertiary mirrors located at a junction of said primary mirror and said tertiary mirror; and
  - wherein said primary and tertiary mirrors abut one another.
2. (previously presented): The optic of claim 1 wherein all said mirrors share a common alignment axis intersecting said vertex.
3. (original): The optic of claim 2 having tilt coincident to said common alignment axis.
4. (canceled)
5. (previously presented): The optic of claim 1 additionally comprising a hole at said junction of said primary and tertiary mirrors.
6. (previously presented): The optic of claim 5 wherein said hole is disposed at an end of said alignment axis to receive, for alignment of said secondary mirror to said primary and tertiary mirrors, insertion of one or both of a rod and a laser.
7. (previously presented): The optic of claim 1 wherein said primary and said tertiary mirrors are diamond turned as a unit.

8. (previously presented): The optic of claim 1 additionally comprising an imaging sensor located at an imaging plane in an optical path following said tertiary mirror.

9. (original): An optical system comprising a three mirror anastigmatic optic according to claim 1.

10. (original): An optical system according to claim 9 selected from the group consisting of hyperspectral imaging sensors, multispectral imaging sensors, infrared imaging systems, electro-optical targeting systems, and remote sensors.

11. (currently amended): A method of making an off-axis three mirror anastigmatic optic, the method comprising the steps of:

placing primary, secondary, and tertiary mirrors wherein said primary and tertiary mirrors abut one another; and

employing a vertex common to the primary and tertiary mirrors at a junction of the primary and tertiary mirrors; and

adjusting the mirrors such that an electromagnetic wave reflected from the tertiary mirror is caused to travel to a position near, but not on the secondary mirror.

12. (previously presented): The method of claim 11 wherein the placing step comprises placing all the mirrors such that they share a common alignment axis that intersects the vertex.

13. (original): The method of claim 12 wherein the optic has tilt coincident to the common alignment axis.

14. (canceled)

15. (previously presented): The method of claim 11 additionally comprising the step of forming a hole at the junction of the primary and tertiary mirrors.

16. (previously presented): The method of claim 15 additionally comprising the step of aligning the secondary mirror with the vertex of the primary and tertiary mirror by insertion of one or both of a rod and a laser through the hole.

17. (previously presented): The method of claim 11 additionally comprising the step of diamond turning the primary and the tertiary mirrors as a unit.

18. (original): The method of claim 11 additionally comprising the steps of locating an imaging sensor at an imaging plane in an optical path following the tertiary mirror and focusing only via movement of the secondary mirror.

19. (currently amended): An anastigmatic optics method comprising the steps of:

- placing primary, secondary, and tertiary mirrors wherein said primary and tertiary mirrors abut one another;
- employing a vertex common to the primary and tertiary mirrors at a junction of the primary and tertiary mirrors;
- adjusting the mirrors such that the tertiary mirror has a focal point which is off the optical axis; and
- incorporating the mirrors in an optical system.

20. (original): The method according to claim 19 wherein in the incorporating step the optical system is selected from the group consisting of hyperspectral imaging sensors, multispectral imaging sensors, infrared imaging systems, electro-optical targeting systems, and remote sensors.